

## SIMULATION AND SYNTHESIS OF METASTABLE FLIP FLOPS

### ABSTRACT OF THE INVENTION

- 5           A method for simulating an array of flip flops including metastable effects. The method can also be used for synthesis. For simulation, a first set of values representing input values for a first rank of flip flops in the array is received. The first set of values includes a bit value for each flip flop in the first rank. An input for each flip flop in a second rank is computed by selecting  
10   between a bit value from the first set of values and a bit value from a second set of values, wherein the second set of values represents values previously held in the first rank. Each flip flop in the second rank thus receives a bit value from either the first set or the second set of values. A metastable boundary is thereby simulated between the first and second ranks of the array.